1: Spier E-5 (1918) 1928
NT14 Plateau Yumans NT14
Havasupai

away and the seeds scraped out and collected. After further drying, the flesh is sliced spirally from side to side, beginning at the stem end, in a strip 2.5 to 5 cm. in width. This coil, 1 to 1.5 m. long, is hung from a pole to dry in the sun. While it is still pliable, it is folded back and forth on itself into a bundle (*hamdyut'lled*), 30 to 45 cm. long, and bound with one end of the strip. This is set aside to dry thoroughly before it is placed in the storehouse for winter use. Squash so dried will keep through an entire year. Melons are also grown. 257

Sunflowers (*dk'lid*) are grown for their seed. Cotton (*Gossypium hopi* Lewton) is raised from seed obtained from the Hopi; the only use for this product is in the strike-a-light. The seeds of wild food plants are not planted; some, such as pigweed, grow in the fields. Peaches and figs, modern foodstuffs, are eaten fresh. Peaches are also torn in two and pitted, while figs are opened, before they are spread on the rocks to dry. 241 [249] [272] [251]

Two varieties of tobacco are known, *tini*, and *kdd'da*, Ju'us (Coyote's tobacco; *Nicotiana trigonophylla* Dunal). Myth has it that the second was grown by Coyote for his own use. Both grow wild on the plateau and in the canyon above the village; their leaves are similar, but the smoke tastes somewhat differently, according to the natives. Tobacco (both varieties?) is grown only on the plateau. A mesquite tree is cut down and burned. The tobacco seeds are thrown into the dead ashes (the soil is not dug up). Willow is not used as substitute. 249

Wild Food Products

These are a valuable adjunct to the food supply, especially from the autumn until spring during the residence on the plateau. During this period they lead a wandering life, families going off in the fall to a place where someone had reported pithon nuts lying plentifully on the ground; winter finds them to the east, hunting in the Cocomino Basin, dropping down to the benches of the Grand Canyon in the spring for mescal, and so on. Women and children are sometimes left to gather seeds while the men go off to trade. 221 222 [462]

Mescal (the agave plant), which grows on the canyon benches, is ripe in May when the flower stalk is 30 to 60 cm. tall. The plant is severed entire by pounding a chisel-shaped buckthorn stick (*tdp'd'l*) about 1 m. long, 3 cm. diameter, against its base. The outside leaves of the inverted plant are trimmed of their green portion with a special hatchet (*tpwidjd*). This consists of a broad stone blade set in a slot midway in the length of a short handle 30 cm. long, (sometimes of pithon wood), where it is held fast with glue or pitch and by lashings. A bowl of [442] 252 [412]

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transversely at the end of a shaft. The Havasupai use a horse scapula but without hafting it.[1] 171 [402]

Cotton is raised by the Hopi, Tewa (except possibly Picuris and Taos), Pima, Maricopa, Western Apache, and Tepehuane. It is not grown by the Navaho, Zuñi, Acoma, or the Tanoan Pueblos.[2] 171 x 248

Tobacco is widely used in North America though it is not everywhere grown. In the Southwest and the adjacent territories its cultivation has been noted for the Zuñi, Hopi, Navaho, Havasupai, Yavapai, San Carlos, Pima, Southern Diegueño, and the Mayos of Mexico.[3] Smoking is known to have been customary among neighboring tribes, who did not raise the plant: Cocopa, Akwa'ala, Mohave, Chemehuevi, Paviotso, Washo, Wind River Shoshoni,[4] and generally in California. The Havasupai habit of planting in ashes without turning the soil is also the custom of the Hupa.[5] 171 249

Unfortunately, I do not know which species the common Havasupai tobacco is. Its name, *áva*, however, is connected with Southern Diegueño *ep* (*N. attenuata*), Shasta *ép*, Takelma *é'p'*, Crow *ép* (*N. multivalvis*), Hidatsa *é'pe* (*N. quadrivalvis*), probably Washo *pinéwi*, and possibly Pima *stopal etafá*, "like tobacco" (*N. trigonophylla*).[6] There is a similar extension of the name "Coyote's tobacco" though again to distinct species; Havasupai (*N. trigonophylla*), Southern Diegueño (*N. attenuata*), and Pima (*N. Bigelovii*). 192 171

Mescal (agave) is gathered and roasted in pits by most, if not all, the new-Pueblo peoples and perhaps by the Pueblo and Mexican tribes as well. It is an item of some importance for the Jicarilla, Mescalero, White Mountain and San Carlos Apache, Navaho, Havasupai, Paiute, Yavapai, Pima, Cahuilla, and Huichol.[7] It would be worth knowing how far this distribution corresponds with that of the plant. Pit roasting is probably absent from the Basin and the Plains, and from California except among the southern desert tribes. But much farther north, in the Plateau and adjacent sections of the Northwest Coast, it is the characteristic mode of preparing roots. The mescal cultigens are probably always pried off with a chisel-edged stick (Havasupai, White Mountain Apache, and Pima) and trimmed with the peculiar hatchet (Havasupai, 171 222 252 [402]

[1] Cushing, (d), Pl. [1], 264; Russell, (d), 98, 97; Pinacateno Pueblos, 261 d. Mohave specimens in the Anthropological Museum, University of California.
Spier, (f), 66.
[2] Whitehead, Curtis (XII, 200 denies that the Hopi plant tobacco; Cushing, 328; Russell, 65, 139; Spier, (a), 249; Hrdlička, (a), 69; Castetter, (a), 268.
[3] Lewis (b), 215; Kroeber, (a), 380.
[4] Castetter, (a), 227.
[5] Lowie, (f), 178. Washo names from Hunter Lowie, 1926.
[6] Castetter, (a), 140-149; Curtis, I, 17-18; Palmer, 647; Cushing, 327; Russell, (d), 98; Parsons, Laufer, (a), 18.